

## ABSTRACT OF THE DISCLOSURE

A wide bore, high field superconducting magnet. The superconducting magnet has a plurality of superconducting coils impregnated with epoxy and nested within each other. An innermost one of the nested coils has a bore therethrough that defines a bore width of the magnet. The bore width is greater than approximately 100 millimeters. The nested coils are electrically connected in series and cooled to an operating temperature less than approximately 4 degrees K. The magnet also has external reinforcements on the coils that are applied prior to impregnating the coils with epoxy. An active protection circuit protects the coils in response to a quench in the magnet. The protection circuit includes heater elements positioned in thermal contact with the coils prior to impregnating the coils with epoxy. The magnet further has lead supports for supporting the lead wires with epoxy that extend from the coils.